

REMARKS

Claims 2-4, 6-17 and 86-101 are currently pending. Claims 2-4 and 6-17 have been allowed. Claims 86-101 have been rejected. Applicant requests reconsideration of the rejections thereto. Claims 1, 5, and 18-85 were previously canceled.

Allowable Subject Matter

Applicant notes with appreciation the indication in the Office Action mailed February 5, 2007 that Claims 2-4 and 6-17 are all considered allowable.

Patentability of Claims 86-101 Under 35 U.S.C. 102(b)

The Office Action mailed February 5, 2007 rejects claims 86-101 under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,444,632 to Kline et al. (hereinafter "Kline"). This rejection is respectfully traversed.

Specifically, claims 86 and 101 each disclose "determining a first magnitude of processing to be done." In discussing this limitation, the Office Action states (citing to Klein):

[in the context of calculating a ranking factor]: determining a first magnitude of processing to be done; determining a second magnitude of production capacity; and computing the ranking factor as a ratio of the first magnitude to the second magnitude (Col. 9, line 66-Col. 10, line 3; Col. 12, line 39-40; Col. 13-14, lines 21-51, for example %CAP of C5 & C4 = 100% because the machine has a 48 wafer capacity, C5 has 24 wafers and C4 has 24 wafers, therefore $100 * ((24+24)/48) = 100\%$ and by reference to a point calculating graph such as that shown in Fig. 11 returns a ranking factor of 4.8 points)

The Office Action presents several specific references to Klein as well as an example calculation. The Applicant will address the references and example calculation in turn.

The References in Klein:

The specific references cited in Klein do not teach “determining a first magnitude of processing to be done.” Specifically, Klein teaches (emphasis added):

Fig. 11 illustrates the relationship between the points corresponding to the score **and the batch machine percent capacity**. The points are calculated by 2 times the processing time divided by 10 times the **percent of capacity of the process resource** divided by 100 minus the processing time divided by 10. (Col. 9, line 66-Col. 10, line 3)

And:

Furthermore, for the sake of illustration, the machine is idle **and has a 48 wafer capacity**. (Col 12, line 39-40)

On Col. 13-14, lines 21-51, the following table (Example 8 in Klein) is presented:

| TOOL SCORE | | 1ST LOT IN BATCH | | 2ND LOT IN BATCH | | TOTAL |
|------------|----------------------|-------------------------|-----|----------------------|-----|-------|
| C5 & C4: | M-IDLE: | W-M: | 0 | W-M: | 0 | -1.2 |
| | -60/10 = -6.0 | W-C: | 60 | W-C: | 60 | 1.75 |
| | PT: 48M | PT: | 48 | PT: | 48 | -3.0 |
| | | | 108 | | 108 | -2.45 |
| | $-(48/48) + 1 = 0.0$ | $-(108/48) + 1 = -1.25$ | | $-(108/108) + 1 = 0$ | | |
| | % CAP: 100% = 4.8 | Q: 60/20 = 3.0 | | Q: -60/20 = -3.0 | | |
| C5: | | | | | | |
| | M-IDLE: 0 | W-M: | 0 | | | 0 |
| | PT: 48 | W-C: | 0 | | | + 3.0 |
| | $-(48/48) + 1 = 0$ | PT: 48 | | | | 3.0 |
| | % CAP: 50% = 0 | $-(48/48) + 1 = 0$ | | | | |
| | | Q: 60/20 = 3.0 | | | | |
| C1 & C2: | | | | | | |
| | M-IDLE: | W-M: | 0 | W-M: | 0 | 5.0 |
| | -10/10 = -1 | W-C: | 10 | W-C: | 10 | 2.33 |
| | PT: 60 | PT: | 60 | PT: | 60 | -0.5 |
| | $-(60/60) + 1 = 0$ | $-(70/60) + 1 = -0.17$ | | $-(70/70) + 1 = 0$ | | 6.83 |
| | % CAP: 100% = 6.0 | Q: 50/20 = 2.5 | | Q: -10/20 = -0.5 | | |
| C1: | | | | | | |
| | M-IDLE: 0 | W-M: | 0 | | | 0 |
| | PT: 60 | W-C: | 0 | | | 2.5 |
| | $-(60/60) + 1 = 0$ | PT: 60 | | | | 2.5 |
| | % CAP: 50% = 0 | $-(60/60) + 1 = 0$ | | | | |
| | | Q: 50/20 = 2.5 | | | | |

Applicant notes that the explanatory text for Example 8 shows various “comparisons” of lots with the next-highest rated lots, and comparisons of compositions of lots. (Klein, Col. 13, ll. 52-63). Klein sums up by teaching that the Klein process can be enhanced “by evaluating the tool score in terms of sub-tool scores and the lot score in terms of sub-lot scores and summing these up and picking the winner.” Klein, Col 13, line 63- Col. 14, ll. 10-13.

Applicant thus notes that in none of the examples cited in the last Office Action does Klein teach “determining a first magnitude of processing to be done” and creating a ranking based on the ratio of the first magnitude of processing to be done and a second calculated capacity magnitude. Rather, on their face, the Klein citations teach calculating based on the “percent of capacity of the process resource” and “evaluating the tool score in terms of sub-tool scores and the lot score in terms of sub-lot scores and summing these up,” both patentably distinct from the “determining a first magnitude of processing to be done” and “ratio of the first magnitude to the second magnitude” taught in the present claims.

The Example Calculation:

Applicant respectfully notes the Examiner’s example that “%CAP of C5 & C4 = 100% because the machine has a 48 wafer capacity, C5 has 24 wafers and C4 has 24 wafers, therefore $100 * ((24+24)/48) = 100\%$ and by reference to a point calculating graph such as that shown in Fig. 11 returns a ranking factor of 4.8 points.” However, Applicant respectfully submits that this example is due to the benefit of hindsight, rather than the text of the Klein reference.

Specifically, the Office Action does not show where the “C5 has 24 wafers and C4 has 24 wafers” has a basis in the text of the Klein reference. Further, the explanatory text associated with example table 8 *does not mention* the percentage capacity measurement noted by the Examiner. Rather, it compares C5+C4 (100% capacity) and C1+C2 (100% capacity) and states that “this combination [C1+C2] receives a higher tool score than C5 and C4 since the score from


machine idle time is significantly higher for the combination of C5 and C4 with respect to C1 and C2.” Klein, Col. 13, ll. 59-63.

Conclusion

As discussed above, claims 86 and 101 are believed to be patentably distinct from that taught and/or suggested by Kline. Claims 87-100 depend from and further limit claim 86, and therefore are patentably distinct from Klein as well. Allowance thereof is therefore respectfully requested.

As noted before, the allowance of claims 2-4 and 6-17 is appreciated. An early formal notice of allowance of claims 86-101 is requested.

Respectfully submitted,


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